

Patent claims

1. A drive device (10) for a light-emitting component (20)
- having a reference source (30), which generates a power
5 stipulation signal (UREF1) stipulating a desired light power,
- having a photodetector (40) for measuring the actual light
power of the light-emitting component,
- having a regulating device (50), which is connected to the
photodetector (40) and the reference source (30) and generates
10 a regulating signal (I1), which regulates the light power of
the light-emitting component (20), in such a way that the
deviation between the desired light power and the measured
actual light power becomes minimal, and
- having a correction device (60), which compensates for a
15 temperature-dictated measurement error of the photodetector
(40) by modifying, in a temperature-dependent manner, the
power stipulation signal (UREF1) generated by the reference
source (30).
- 20 2. The drive device as claimed in Claim 1, characterized in
that the correction device (60) has a memory (640), correction
values (K(T)) for the temperature-dependent modification of
the power stipulation signal (UREF1) being stored in said
memory.
- 25 3. The drive device as claimed in Claim 2, characterized in
that the correction device (60) has a control device (620),
which, with a temperature sensor (630), measures the
temperature (T) of the monitor diode (40) or a temperature (T)
30 proportional thereto and reads from the memory (640) that
correction value (K(T)) which is respectively assigned to the
measured temperature value (T).

4. The drive device as claimed in Claim 2 or 3, characterized in that the correction values $(K(T))$ and the assigned temperature levels or temperature ranges are stored in table form in the memory (640).

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5. The drive device as claimed in Claim 4, characterized in that the memory (640) contains a "look-up" table, as a table.

6. The drive device as claimed in Claim 3, 4 or 5,
10 characterized in that the control device (620) of the correction device (60) is formed by a controller module, in particular by a microprocessor.

7. The drive device as claimed in one of the preceding Claims
15 2 to 6, characterized in that the memory (640) is freely programmable.

8. The drive device as claimed in one of the preceding claims, characterized in that the correction device (60) has a
20 digital-to-analog converter (610) connected downstream of the control device (620).

9. The drive device as claimed in Claim 8, characterized in that the digital-to-analog converter (610) forms an analog
25 modification signal (I_{mod}) from the correction value $(K(T))$ read from the memory (640) by the control device (620) or an auxiliary correction value derived therefrom, the power stipulation signal (U_{REF1}) of the reference source (30) being modified by means of said modification signal.

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10. The drive device as claimed in one of the preceding claims, characterized in that the correction device (60) has an analog adder (600), which adds the modification signal (I_{mod}) of the digital-to-analog converter (610) or an

auxiliary modification signal (Imod') formed by means of the latter to the power stipulation signal (UREF1) of the reference source (30).

5 11. The drive device as claimed in Claim 10, characterized in that the adder (600) is formed by an operational amplifier circuit.

10 12. The drive device as claimed in one of the preceding claims, characterized in that the light-emitting component is a laser (20).

15 13. The drive device as claimed in one of the preceding claims, characterized in that the photodetector is a monitor diode (40) of the laser (20).

14. A method for driving a light-emitting component (20), in which
- a desired light power is stipulated,
20 - the actual light power of the light-emitting component (20) is measured by means of a photodetector (40), and
- the light-emitting component (20) is regulated in such a way that the deviation between the desired light power and the measured actual light power becomes minimal,
25 - a temperature-dictated measurement error of the photodetector being compensated for by virtue of the stipulated desired light power being modified in a temperature-dependent manner.

30 15. The method as claimed in Claim 14, characterized in that correction values ($K(T)$) are read from a memory (640) for the purpose of modifying the desired light power.

16. The method as claimed in Claim 14 or 15, characterized in that the correction values ($K(T)$) for the temperature-dependent modification of the desired light power are stored in table form in the memory.

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17. The method as claimed in Claim 16, characterized in that the correction values are stored in the form of a "look-up table".